

Exhibit “3”

CURB STOP/SWING CHECK VALVES

PP/PVC
PP/316 SS

DESCRIPTION

Polypropylene Curb Stop / PVC or 316 SS Swing Check Assemblies for PE/PVC pressure piping applications.

TUBE

IPS(OD) For use on HDPE Pipe SDR 7.3 thru SDR 17 (Sizes 1-1/4" - 2")
For use on Sch 40/80 PVC Pipe with SS Gripper Ring (Sizes 1-1/4" - 2")

CTS(OD) For use on Certified PE Pipe SDR 9 & SDR 11 (Sizes 1-1/4" - 2")
For use on Cross Linked Pipe PE SDR 9 for Cold Water Only. (Sizes 1-1/4" - 2")

WORKING PRESSURE

PP Curb Stop / PVC Check Valve at 73° F (23° C) 1-1/4" rated to 200 PSI,
1-1/2" & 2" rated to 125 PSI
PP Curb Stop / 316 SS Check Valve at 73° F (23° C) 1-1/2" - 2 "rated to 200 PSI

FEATURES

Compression (IPS & CTS) & FIPT end connectors available
Curb Stop handle has built in torque overload protection (ratcheting handle)
Check Valves available in PVC or 316 SS
No Inserts Required
Fully Serviceable
EPDM O-Rings
Color coded
Curb Stop is UV stabilized
Pre-assembled prior to leaving factory
ISO 9001 certified

APPLICATIONS

Low Pressure Sewer



1-1/4" IPS PP CURB STOP/PVC SWING CHECK ASSEMBLY



1-1/2" IPS PP CURB STOP/SS SWING CHECK ASSEMBLY

Exhibit “4”

FORCED SEWER ASSEMBLY

SUBMITTAL INFORMATION - PP/PVC

Curb Stop Valves:

Thermoplastic curb stop valves for forced sewer applications shall be manufactured from Polypropylene compound and be ISO 9002 certified. All valves shall be rated for 200 PSI Service. Each valve shall have an operating handle profiled for manual or service key operation. The handle shall have a built-in safety feature that disengages and ratchets in either direction when operating torque exceeds 20 ft. lbs. Valves shall have end connections to accommodate the specified service tubing.

Swing Checks:

Swing check valves for forced sewer services shall be manufactured from Ultra High Impact PVC Material. All 1-1/4" valves shall be rated for 150 PSI back pressure and 1-1/2" & 2" valves shall be rated for 125 PSI. 1-1/4" valves shall have end connections to accommodate the specified service tubing. 1-1/2" and 2" valves shall have female NPT ends with injection molded compression by male NPT pressure fittings installed to accommodate the specified service tubing.

Service Connection Fittings:

Thermoplastic pressure fittings for cold-water applications shall be manufactured from Polypropylene compound and shall be rated for 200-PSI service. Fittings shall have outside O-ring sealed compression ends designed for the specified service tubing. Fittings should be ISO 9002 and NSF certified. Install fittings as per manufacture's recommendations.

Polypropylene Service Saddles:

Injection molded hinge style plastic saddle for use on O.D. controlled High Density Polyethylene Pipe (HDPE) and Schedule 40 and Schedule 80 PVC shall provide a pressure rated connection. Gasket shall be manufactured from SBR rubber and be molded in place. Saddles shall have a working pressure of 150 PSI and have been fully tested for use on Polyethylene main line pipe up through 4" diameter.

Curb Stop/Swing Check Assembly:

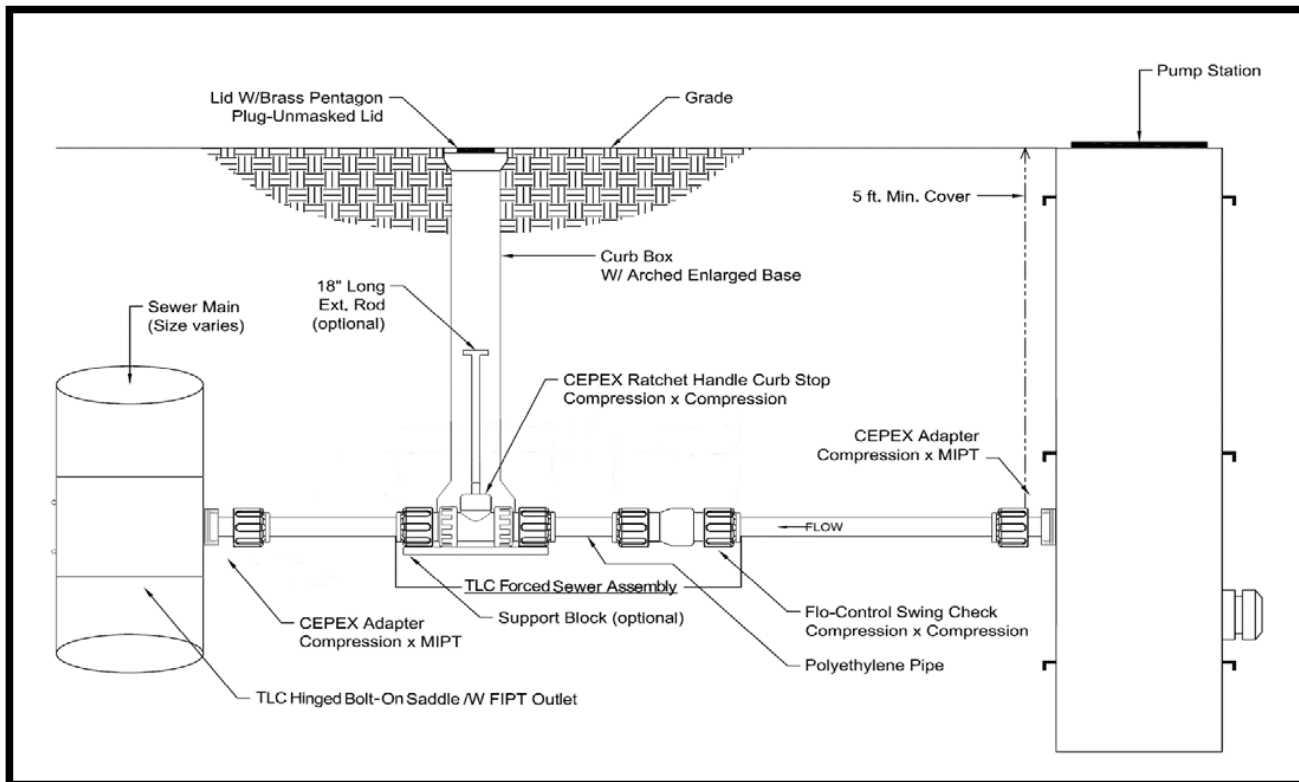
The Curb Stop/Swing Check Assembly shall contain a Curb Stop as described under heading "Curb Stop" and a Swing Check as described under heading "Swing Check". The Curb Stop and Swing check shall be joined with a section of 6" through 12" Polyethylene pipe of the same size as the lateral specified tubing. The assembly shall be shipped as a completed unit with ends to accommodate the specified service tubing.





FORCED SEWER ASSEMBLY


SUBMITTAL INFORMATION - PP/PVC

FORCED SEWER MODEL WITH TLC PP CURB/CHECK ASSEMBLIES TO PUMP STATION



 FORCED SEWER ASSEMBLY IPS (OD) COMP x COMP PP CURB/PVC CHECK BODY	PART NO.	SIZE	WORKING PRESSURE	WT EA.
	GR1125-DB	1-1/4"	200 PSI	3.54
	GR3150-DB	1-1/2"	125 PSI	5.40
	GR6211-DB	2"	125 PSI	8.08

 FORCED SEWER ASSEMBLY CTS (OD) COMP x COMP PP CURB/PVC CHECK BODY	PART NO.	SIZE	WORKING PRESSURE	WT EA.
	GR2150-DB	1-1/2"	200 PSI	3.58
	GR6209-DB	2"	125 PSI	6.34

 FORCED SEWER ASSEMBLY IPS (OD) PVC x PVC PP CURB/PVC CHECK BODY	PART NO.	SIZE	WORKING PRESSURE	WT EA.
	GR1025-DB	1-1/4"	200 PSI	3.54
	GR4150-DB	1-1/2"	125 PSI	5.40
	GR6200-DB	2"	125 PSI	8.08

FORCED SEWER ASSEMBLY

SUBMITTAL INFORMATION - PP/PVC

INSTALLATION INSTRUCTIONS

FOR COMPRESSION ENDS

1. Cut the pipe square or straight (Preferably with Pipe Cutters) .
2. Chamfer the outer edge of the pipe (Preferably with a chamfer tool) .
3. Loosen the nut on the compression end of the fitting or valve to the last couple of threads (It is not necessary to remove the nut).
4. Insert pipe to first stop, which will be the o-ring (The o-ring has been lubricated to make insertion easier but additional pipe lube can be added).
 - On 3" & 4" Fittings: Field lubricate the o-ring and the pipe with pipe lube.
 - When installing tees in existing or directionally drilled lines it is imperative to use repair couplings to ensure pipe is relaxed and is pushed past the o-ring.
5. Push pipe past the o-ring to next stop.
6. Tighten the nut using a pipe wrench or a strap wrench, (Do not over tighten - Keep in mind that you are using plastic and not an indestructible material).

FOR MALE THREADED ENDS


1. Double wrap threads with Teflon tape or use Teflon paste (Use only Teflon based paste not petroleum based).
2. Thread male end into female end using a strap wrench or a wrench (Do not over tighten).

FOR BALL VALVE / CURB STOP INSTALLATION PROCEDURES

Follow installation procedure for compression fittings but when tightening compression nut of the Ball Valve or Curb Stop, secure with (back wrench) the union nut of the valve. This will prevent over tightening of the union nut. After tightening the compression end or ends of the valve check to see if the valve is operating properly.

Note: If the handle of the ball valve does not turn or the ratchet of the curb stop engages immediately then the ball is seized. To correct: loosen the union nut on the inlet side of the valve and retighten, checking the operation of the valve as you do so.

FOR CURB STOP / SWING CHECK INSTALLATION PROCEDURES

1. Follow above installation procedure.
2. *Check correct orientation of the check valve*
(Ensure the horizontal  on check valve is at the 12 o'clock position).

